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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,601	05/03/2002	Nicholas E. Roddy	121891	9698
29391	7590	03/30/2005	EXAMINER	
BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A. 390 NORTH ORANGE AVENUE SUITE 2500 ORLANDO, FL 32801			GUYTON, PHILIP A	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/063,601

Applicant(s)

RODDY ET AL.

Examiner

Philip Guyton

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,12,17 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,13-16 and 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20050214</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-11, 13-16, and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,598,179 to Chirashnya et al. (hereinafter Chirashnya) in view of U.S. Patent No. 6,256,594 to Yamamoto et al. (hereinafter Yamamoto).

With respect to claim 1, Chirashnya discloses a method for processing in a diagnostics processor fault log data from a machine comprising a plurality of respective pieces of equipment (column 2, lines 3-5), the method comprising:

processing fault log data [error log (column 2, lines 6-10)] comprising a plurality of faults from any malfunctioning piece of equipment, said processing configured to identify a plurality of distinct faults in the fault log data [fault conditions of interest (column 2, lines 16-18)];

generating at least one distinct fault cluster [events (column 2, lines 21-24)] from the plurality of distinct faults;

processing a plurality of accumulated diagnostic cases to correlate a plurality of weighted [probability (column 3, lines 36-39)] repairs and distinct fault cluster

combinations [multiple possible faults and associated cures (column 6, lines 25-35)];  
and

identifying at least one repair for the at least one fault cluster using the plurality of weighted repair and distinct fault cluster combinations [results displayed to user (column 12, lines 45-53)].

Chirashnya does not disclose expressly the method further processing operational parameter data indicative of operational and/or environmental conditions for the respective pieces of equipment, with said operational parameter data being encoded to be processed by the diagnostics processor in combination with the fault log data to generate diagnostics information for the respective pieces of equipment, the method comprising:

processing operational parameter data relatable to each respective time of occurrence of the plurality of faults from the malfunctioning equipment, said processing configured to access a plurality of data buckets comprising a plurality of states that may be assumed by each operational parameter;

encoding each generated fault cluster with a code indicative of a respective state of at least one operational parameter at the time of fault occurrence to provide at least one fault cluster encoded with operational parameter state data;

However, Yamamoto teaches:

processing operational parameter data indicative of operational and/or environmental conditions for the respective pieces of equipment (column 1, lines 17-30), with said operational parameter data being encoded to be processed by the diagnostics

processor in combination with the fault log data to generate diagnostics information for the respective pieces of equipment (column 7, lines 3-53 and figure 3), the method comprising:

processing operational parameter data relatable to each respective time of occurrence of the plurality of faults from the malfunctioning equipment (column 2, lines 50-64), said processing configured to access a plurality of data buckets comprising a plurality of states that may be assumed by each operational parameter (figure 4 and column 7, lines 20-46);

encoding each generated fault cluster with a code indicative of a respective state of at least one operational parameter at the time of fault occurrence to provide at least one fault cluster encoded with operational parameter state data (Fig.3 and column 3, lines 1-10);

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Chirashnya with the teachings of Yamamoto. A person of ordinary skill in the art would have done so to allow for supplementary determination of the seriousness of a fault (Yamamoto— column 1, lines 17-22 and column 2, lines 16-28), providing an enhanced result for the operator (Chirashnya – column 1, lines 28-41).

With respect to claim 2, modified Chirashnya discloses wherein each data bucket is configured to capture and distinguish statistically-measurable influences on the performance of a given piece of equipment based on the respective state of each operational parameter [variables dictating ranges may be set depending on parameter (Yamamoto - column 7, lines 20-46)].

With respect to claim 3, modified Chirashnya discloses wherein each of the plurality of weighted repair and distinct fault cluster combinations is generated from a plurality of cases (column 6, lines 28-35 and column 12, lines 59-67), each case comprising a repair and at least one distinct fault encoded with operational parameter state data.

With respect to claim 4, Chirashnya discloses determining a respective weight [probability or severity (column 11, lines 42-56)] for each of the plurality of weighted repair and distinct fault cluster combinations encoded with operational parameter state data.

With respect to claim 6, modified Chirashnya discloses wherein the operational parameter data comprises a plurality of snapshot observations [status code (Yamamoto – column 7, lines 7-19)] of operational parameters from the pieces of equipment.

With respect to claim 7, modified Chirashnya discloses wherein the respective snapshot observations of operational parameters from the machine and the logging of respective faults from the machine are temporally aligned relative to one another (Yamamoto – column 7, lines 7-11).

With respect to claim 8, modified Chirashnya discloses wherein the operational parameter data comprises a plurality of continuous observations [snapshot data (Yamamoto – column 1, lines 46-50 and column 8, lines 38-49)] of operational parameters from the machine.

With respect to claim 9, modified Chirashnya discloses wherein the respective continuous observations of operational parameters from the machine and the logging of

respective faults from the machine are temporally co-relatable to one another (Yamamoto – column 8, lines 38-49).

With respect to claim 10, modified Chirashnya discloses the features as in claim 1 above, and additionally discloses predicting at least one repair for the at least one fault cluster encoded with operational parameter state data using the plurality of weighted repair and distinct fault cluster combinations encoded with operational parameter state data [results and probabilities displayed to user (column 12, lines 45-53)].

With respect to claim 11, modified Chirashnya discloses wherein each of the plurality of weighted repair and distinct fault cluster combinations is generated from a plurality of cases (column 6, lines 28-35 and column 12, lines 59-67), each case comprising a repair and at least one distinct fault enhanced with operational parameter state data.

With respect to claim 13, modified Chirashnya discloses the features as in claim 1 above, and further discloses a system including a database (Fig.1, item 26, column 3, lines 63-67 and column 4, lines 1-2), and a processor (Fig.1, item 22 and column 3, lines 51-62) for the respective method of claim 1.

Claims 14-16 and 18-21 are a system for the method of claims 2-4 and 6-9, respectively, and are rejected on the same grounds.

Claims 22 and 23 are a computer-readable medium for the method of claims 10 and 11, and are rejected on the same grounds.

***Allowable Subject Matter***

3. Claims 5, 12, 17, and 24 are allowed.

***Response to Arguments***

4. Applicant's arguments filed 2/14/05 have been fully considered but they are not persuasive. Applicant states that the Yamamoto reference fails to overcome the deficiencies of Chirashnya. The examiner respectfully disagrees.

Chirashnya discloses processing a plurality of accumulated diagnostic cases (column 6, lines 25-35) to correlate a plurality of weighted (column 3, lines 36-39) repairs and distinct fault cluster combinations (column 6, lines 25-35), and hence this feature is not a deficiency of the present reference. Applicant asserts that Yamamoto does not teach processing of fault log data and operational parameter data to generate diagnostics information. However, as shown above, Yamamoto discloses fault log data (column 7, lines 3-11) as well as operational parameter data (column 7, lines 12-46), which are processed to generate diagnostics information (column 9, lines 37-67 and column 10, lines 1-4).

Additionally, it is noted that one of the features upon which applicant relies (i.e., "operational parameter data (encoded to operate as fault log data)) is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Guyton whose telephone number is (571) 272-3807. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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